

*City of Bath.*

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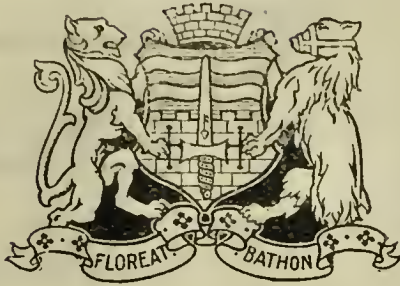
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CITY OF BATH.



# ANNUAL REPORT

OF THE

# MEDICAL OFFICER of HEALTH

AND OF THE

CHIEF INSPECTOR OF NUISANCES

FOR THE YEAR

1920.

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JAMES F. BLACKETT, M.D. (Lond.), D.P.H.,  
Medical Officer of Health.

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BATH:  
WM. F. KNIGHT, 19, GREEN STREET.

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**CITY OF BATH.**

December, 1920.

*Mayor :*

Alderman J. H. COLMER.

**HEALTH COMMITTEE.***Chairman :* Councillor T. VEZEY.*Chairmen of Sub-Committees :**General Purposes :* Councillor T. B. TIMMINS.*Maternity & Child Welfare :* Councillor Miss HOPE.*Statutory Hospital :* Alderman PRESTON KING, M.D.The Mayor, Aldermen P. Jackman, Preston King, M.D.,  
and F. W. Spear.*Councillors :—*

W. Barrett	S. Day	Miss Hope	A. G. F. Spurr
A. Beasley	J. Evans	R. Isgar	T. B. Timmins
E. Coleman	A. Ford	S. R. Sendell	T. Vezey
C. Cowley	C. H. Hacker	A. J. Sims	
W. Dawe	A. W. Hazell	H. C. Smith	

Co-opted Members—*Maternity Sub-Committee :* Mrs. Cordiner,  
Mrs. C. H. Long, Mrs. Luker, Mrs. Wilson, Miss Wilson-Smith,  
and Dr. Wigmore. *Statutory Hospital* (for questions relating  
to Venereal Disease)—Mr. F. Lace, F.R.C.S. and Mr. J. M.  
Harper, M.R.C.S., D.P.H.

**HOUSING COMMITTEE.***Chairman :* Alderman C. H. LONG,The Mayor, Aldermen S. W. Bush, W. F. Gould, C. H. Long,  
and A. W. Wills.*Councillors :—*

W. Barrett	C. Cowley	W. Jackman	T. B. Timmins
H. A. Biggs	S. Day	S. D. Kennard	
T. Chamberlain	W. Dawe	A. B. Paget	

**STAFF.***Medical Officer of Health and Superintendent of Statutory Hospital :*  
James F. Blackett, M.D., B.S. (Lond.), D.P.H.*Assistant Medical Officer of Health :*

Robert E. Thomas, M.D., B.S. (Lond.), M.R.C.S., L.R.C.P., D.P.H.

*Medical Attendant of the Statutory Hospital :*

Octavius A. G. Collins, B.A., B.C., M.R.C.S., L.R.C.P.

*Matron of the Statutory Hospital :* Miss H. Arthur.*Health Visitors :* Miss Axten, Mrs. Inman, and Miss Nash.*Tuberculosis Nurse :* Miss Broad.*Chief Inspector and Inspector of Nuisances :*

Walter A. Craven,

Cert. as Inspector of Nuisances &amp; Meat Inspector.

*Assistant Inspectors :*

W. T. Blake, Cert. as Inspector of Nuisances.

J. W. Elliott, Cert. as Inspector of Nuisances &amp; Meat Inspector,

S. D. Hawkins and R. J. White.

*Chief Clerk :* C. J. Pring.*Assistant Clerks :* Miss Bartlett, A. J. Smith.



## Summary of Statistics.

### City and County Borough of Bath.

#### Health Resort and Chief Town of Somerset.

Area of the Borough, 5152 statute acres.

Situation—Latitude  $51^{\circ} 23' N.$ , Longitude  $2^{\circ} 21' W.$

Elevation—Varies from 50 feet above Sea Level on the lower banks of the Bath Avon to about 550 feet on the South and 700 feet on the North.

Mean Elevation—269 feet above Sea Level.

Geological Formation—Oolitic Clays, Limestones and Sands; Lias; and Gravel.

Water—Constant Service, Corporation Reservoirs.

Capacity 61,250,000 gallons. Moderately hard, spring water.

Average daily consumption 22 gallons per head.

Sewage disposal almost exclusively by water carriage.

Treated at Saltford.

House refuse removed and cremated by the Sanitary Authority.

Population—1911 Census, 69,173; Males 29,230, Females 39,943.

Years ...				1920.	1919.	Mean of 1916-20	Mean of 1911-15
Population—estimated for calculation of Birth and							
	Marriage Rates	...		68708	68668	68179	69862
	Ditto. Death Rates	...		68546	65919	63639	68494
Rainfall (Mean of 55 yrs., 1866 - 1920, 30.84 ins.)				31.61	31.81	33.06	32.36
Inhabited Houses—(Census 1911, 14080) Rate book				15425	15425	15277	14937
Assessable Value in December				£ 414598	411694	411090	411289
Rateable Value in December				£ 418198	415284	414667	414986
Rates—District Rate				6/10	5/-	5/1	4/5
Poor Rate, etc.				6/8	5/6	4/7	3/3
Total per £ ...				13/6	10/6	9/8	7 8
One penny Poor Rate produced				£ 1612	1612	1596	1567
" District Rate produced				£ 1547	1547	1533	1508
Total nett indebtedness				£ 499716	535718	567291	681451
Ditto. ditto. per person				£ 7 - 4 - 6	7-14-11	8 - 4 - 0	10-11-4
MARRIAGES—Number Registered				740	690	610	558
Rate per 1000 population Bath				21.6	20.1	17.9	16.4
Ditto. England and Wales				20.1	19.7	16.8	16.4
BIRTHS—Number ..				1314	980	995	1117
Rate per 1000 population				19.1	14.3	14.6	15.9
Ditto. ditto. England and Wales				25.4	18.5	20.1	23.6
Illegitimate Births per 1000 Infants born, Bath				59	91	81	48
DEATHS—Number—Bath residents (Civilians)				819	950	923	934
Nett Rate per 1000 population Bath				11.9	14.4	14.5	13.6
Corrected rate for age and sex				10.3	12.5	12.6	11.8
Death rate ... England and Wales				12.4	13.8	14.5	14.3
Comparative Mortality Figure				831	906	870	838
INFANTILE MORTALITY—							
Bath				52	41	61	78
England and Wales				80	89	91	110
Illegitimate Infants (Bath)				90	56	93	149
DEATHS from Diarrhæa and Enteritis (under 2 yrs.)				6	—	3	12
Ditto. Rates per 1000 births Bath				4.57	—	2.84	10.81
Ditto. Ditto. England and Wales				8.30	9.59	10.83	23.47

## SUMMARY OF STATISTICS—continued.

	Years	...	1920.	1919	Mean of 1916-20	Mean of 1911-15
PRINCIPAL CAUSES OF DEATH—Civilians only—						
Pulmonary Tuberculosis	...	...	44	50	57	61
"Other" Tuberculosis	...	...	10	8	13	14
Influenza	...	...	17	57	46	15
Pneumonia	...	...	49	67	60	57
Bronchitis	...	...	57	67	75	82
Cancer	...	...	87	111	96	92
Cerebral Hæmorrhage and Hemiplegia	...	...	69	71	68	71
Heart Disease	...	...	116	157	133	112
Nephritis	...	...	22	34	28	36
Senile Decay	...	...	78	74	87	86
Seven principal "Zymotic Diseases"	...	...	18	6	18	39
DEATH-RATES PER 1000 POPULATION FROM—						
Pulmonary Tuberculosis	...	..	0.64	0.76	0.90	0.89
Tubercular Meningitis	...	...	0.04	0.05	0.07	0.07
"Other Tuberculosis"	...	...	0.10	0.08	0.13	0.13
Seven principal "Zymotic Diseases"	...	...	0.26	0.09	0.29	0.57
Influenza	...	...	0.25	0.86	0.73	0.22
Pneumonia	...	...	0.72	1.02	0.95	0.84
Bronchitis	...	...	0.83	1.02	1.19	1.21
Other Dis. of Respiratory Organs	...	...	0.16	0.17	0.20	0.21
Cancer	...	...	1.27	1.68	1.52	1.34
DEATHS AT VARIOUS AGE PERIODS—						
Under 1 year	..	...	68	40	59	87
1 to 5 years	...	...	19	21	26	39
Between 5 and 60 years	...	...	237	279	295	296
Over 60 years	...	...	495	610	542	512
INFECTIOUS DISEASE—Cases notified (Civilians)—						
Diphtheria...	...	...	65	73	81	64
Scarlet Fever	...	...	107	106	99	226
Enteric Fever	..	...	5	8	5	11
Erysipelas	...	...	16	26	29	54
Chicken pox	...	...	95	161	127	155
Ophthalmia Neonatorum	...	...	14	14	12	5
Pulmonary Tuberculosis	...	...	151	146	138	133
"Other" Tuberculosis	...	...	31	9	25	40
Puerperal Fever	...	..	5	2	2	3
INFECTIOUS DISEASE—Attack Rates per 1,000 pop.						
Diphtheria	...	...	0.95	1.11	1.29	0.95
Scarlet Fever	...	...	1.56	1.61	1.55	3.29
Enteric Fever	...	...	0.07	0.12	0.08	0.16
Erysipelas	...	...	0.23	0.39	0.46	0.79
Puerperal Fever	...	...	0.07	0.03	0.03	0.05
Pulmonary Tuberculosis	...	...	2.20	2.21	2.17	2.08†
"Other" Tuberculosis	...	...	0.45	0.14	0.39	
NUMBER OF DEATHS FROM —						
Diphtheria...	...	...	3	4	6	5
Scarlet Fever	...	...	1	—	—	2
Enteric Fever	...	...	—	2	1	1
Erysipelas	...	...	1	1	1	2
Measles	...	...	7	—	—	11
Whooping Cough	...	...	1	—	3	8
Puerperal Fever	...	...	1	4	2	2
DEATH-RATES PER 1000 POPULATION FROM—						
Diphtheria...	...	...	0.04	0.06	0.09	0.06
Scarlet Fever	...	...	0.01	—	0.01	0.03
Enteric Fever	...	...	—	0.03	0.01	0.02
Erysipelas	...	...	0.01	0.02	0.01	0.03
Measles	...	...	0.10	—	0.05	0.16
Whooping Cough	...	...	0.01	—	0.08	0.11
Puerperal Fever	...	...	0.01	0.06	0.03	0.03
VACCINATION—Percentage of Infants vaccinated						
			15*	20		28

†Four years, 1912-15 only. \*Jan. to June only.

**To His Worship the Mayor, and to the Aldermen and  
Councillors of the City of Bath.**

LADIES AND GENTLEMEN.

I have the honour to submit for your consideration my Annual Report as Medical Officer of Health for the City of Bath. The Report is intended to deal with the sanitary conditions of the City and the health of its inhabitants during the year 1920, and includes an account by the Chief Sanitary Inspector of the work done by him and under his supervision. The general arrangement is based on suggestions made by the Ministry of Health.

Until I took up my duties on January 1st, 1920, there had been no whole time Medical Officer at the Health Office for over 2 years, and 4 of the staff had been in the Army for varying periods during the War. In spite of this, Dr. Collins, Mr. Craven, and others who remained, had managed to carry on the essential services. Naturally, however, many things had been left over until the appointment of Dr. Symons' successor. Outside the usual routine, therefore, the year's activities at the Office consisted largely of organisation and consolidation in connection with the numerous developments of health work in recent years.

At the end of July, Dr. Milligan, the late School Medical Officer, left Bath, and from August 1st I was placed in control of the School Medical Department as well as at the Health Office. In December, Dr. R. E. Thomas was appointed Assistant Medical Officer of Health and School Medical Officer. Similar co-ordination of medical services under one responsible officer is being adopted in other parts of the Country and is found to give the most satisfactory results. In March, Dr. Cook, of Bristol, became City Analyst, in place of the late Mr. Gatehouse who had served the Council faithfully and well in that capacity for a great number of years.



The outstanding features, as far as Vital Statistics are concerned, were:—

1. The death-rate of 10·3 per 1,000 population was the lowest ever recorded and compares with a rate of 12·4 for England and Wales.

2. A birth-rate of 19·1, which is an increase of nearly 40 per cent. as compared with the average recorded during the War. The increase, however, reached its maximum during the first quarter and has not since been maintained.

3. The lowest death-rate yet recorded from Tuberculosis (0·78).

4. A fortunate immunity from any epidemic of notifiable infectious disease.

More detailed figures on all these points will be found in the tables.

The question of Housing is dealt with somewhat briefly on this occasion because the needs of the City have been thoroughly discussed in several previous reports and are well-known. The Housing Committee are fully aware of what ought to be done and have taken every practicable step to get the situation relieved. By the end of 1920, 74 of the 281 houses included in the Englishcombe Lane scheme, were well in hand. By the middle of 1921 most of these houses were already inhabited—but in the meantime municipal building operations were again at a standstill. From the point of view of the Public Health, a relaxation in the effort to solve the Housing Problem is nothing less than a disaster, and will inevitably lead to a further weakening of the sanitary conscience of the nation, which is already far less acute than it was 10 years ago. I want to say, therefore, as emphatically and definitely as I can, that although the present economic situation may, and apparently does, render such relaxation temporarily unavoidable, it cannot in the slightest degree affect the *need* for more houses. Of all the causes which tend to undermine the health of the people, a shortage of suitable housing accommodation is by far the greatest. It is indeed of fundamental importance and is one of

the primary factors associated with Tuberculosis, Infant Mortality, and the spread of Infectious Disease. It is probably true to say that the kind of houses in which people have to live not only determines to a large extent the general mental outlook of the community, but has a considerable effect on the amount of intemperance, immorality, and other social evils, which may be present. One feels inclined to press this point a little, because there seems to have been a tendency in certain quarters to suggest that the needs of our City have been exaggerated. I am quite sure that the Scheme submitted by the Council to the Ministry of Health does not ask for a single unnecessary house. Time and again in the course of their work the Inspectors are unable to insist upon reasonable improvements, or to enforce the removal of legitimate grievances, because of lack of alternative accommodation. It may be inevitable that there should be delay, but it must not for one moment be admitted that any part of the Scheme should ultimately be abandoned.

I have to express my thanks to the Chairmen and Members of the various Committees concerned with Public Health work for the sympathetic consideration they have always given to suggestions brought before them, and also to the Chief Sanitary Inspector and the whole of the Health Office Staff, for their help and co-operation during the year.

I remain, Ladies and Gentlemen,

Yours faithfully,

JAMES F. BLACKETT,

*Medical Officer of Health.*

Bath, *November*, 1921.

# REPORT of the MEDICAL OFFICER OF HEALTH for the City of Bath, for the Year 1920.

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## PHYSICAL FEATURES.

Bath is situated in Lat.  $51^{\circ} 21' - 24'$  N. and Long.  $2^{\circ} 20' - 23'$  W., and lies on a bend in the valley of the Avon. The City spreads upwards on the surrounding hills which in one place or another present every variety of aspect, and rise to heights of 500-700 feet. The parts near the River are 60 feet above sea level, while half a mile away from the boundary a height of 750 feet is attained.

## CLIMATE.

The Climate of Bath is, generally speaking, mild and equable. A certain variety in the temperature which may be observed in different parts of the City, is natural in view of the varying heights and aspects of the hills, and of the different subsoils to be found.

An average taken over a period of 55 years (1866-1920), shews the annual rainfall to be 30·84 inches. The average mean temperatures (22 years, 1899-1920) are, Spring  $52^{\circ} \cdot 4$ , Summer  $59^{\circ} \cdot 5$ , Autumn  $45^{\circ} \cdot 3$ , Winter  $41^{\circ} \cdot 2$ , Year  $49^{\circ} \cdot 7$ . February is the coldest month (mean  $40^{\circ} \cdot 3$ ) and July the hottest (mean  $61^{\circ} \cdot 1$ ). The average amount of bright sunshine is, Spring 557·9 hours, Summer 549 hours, Autumn 206·8 hours, and Winter 239·1 hours, or 1,552·8 hours for a year. The prevailing winds are S.W. and W.

Detailed records for 1920 will be found on pages 51 & 52.

## **SOCIAL CONDITIONS AND ADMINISTRATION.**

Bath is to a large extent residential, rather than industrial, and there is a considerable well-to-do population. The chief industries are Cabinet Making, Engineering, and Cloth Making. These appear to be carried on under conditions which are satisfactory as far as the health of the workers is concerned.

The City is divided into 14 wards, each represented by three Councillors, one of whom retires each year. There are 14 Aldermen, half of whom retire every three years. The Roll of Mayors dates back to the thirteenth Century.

Municipal undertakings include the Water Supply, Electric Lighting Works, and Sewage Disposal. The amount of Corporate Property is considerable.

## **HOSPITALS AND OTHER FORMS OF GRATUITOUS MEDICAL RELIEF.**

Apart from special hospitals, the chief institution is the Royal United Hospital, which serves not only Bath, but a district many miles round. The Royal Mineral Water Hospital has 140 beds and exists "for gratuitously extending to the poor of the United Kingdom the benefits which the hot springs of the City afford" in rheumatic and other diseases. There are several Dispensaries and special Hospitals, and also a large number of smaller charities and societies which do most valuable work in the limited spheres with which they are concerned.

It is difficult to give statistics relating to the City in connection with these institutions, because most of them serve a large surrounding area. Their figures consequently relate, for the most part, to all the cases with which they deal and not to Bath cases only.

## **WATER SUPPLY.**

The whole of the public supply is from springs which flow out at two geological levels. The water of the upper series collects on the clay of the Fullers Earth, which separates the Great and the Inferior Oolite. The lower springs issue from the Midford Sands between the base of the Inferior Oolite and the Lias. The former and more superficial vary greatly in their



yield, but apart from prolonged and abnormal drought there is in the aggregate an ample and constant source of supply. It is essential however that arrangements should be made to collect and utilise some of the large surplus which now runs to waste.

The water collects in reservoirs owned by the Corporation and reaches the lower parts of the City by gravitation. A pumping station in connection with the Charlcombe reservoir maintains the supply to the higher levels on the Lansdown side. By arrangement with the Corporation, houses on the hills to the South and West of the City get a high level supply of similar natural origin from the Combe Down Waterworks Company. In a very few cases water is obtained direct from wells or springs.

City Reservoirs.		Capacity.
Monkswood ..	..	51,000,000 gallons.
Batheaston ..	..	9,250,000 „
Bathwick	}	.. 500,000 „
Charlcombe		
Lansdown		
Oakford ..	..	500,000 „

**Nature and Quality of Water.** The purity of the supply as regards the absence of harmful contamination, either chemical or bacteriological, is extremely satisfactory. A recent and typical examination (31-5-21) included the following results:—

Saline Ammonia..	..	Absent
Albuminoid Ammonia	..	·0018 grains per gall.
Nitrites ..	...	Absent
Chlorides ..	..	1.1 „ „ „
Hardness ..	..	20.5
Bacillus Coli absent in 100 c.c.		
Streptococcus ..	..	Absent
B. Enteritidis ..	..	Absent
Poisonous Metals	..	Absent.

**Daily Consumption per head.**—22.85 gallons.

## RIVERS AND STREAMS.

It has not been necessary to take any action during the year with regard to pollution.



## DRAINAGE AND SEWERAGE.

Nearly the whole of the sewage of the City is dealt with by a combined water-carriage system, which in the first place conveys it to the Pumping Station at Twerton. From here it passes through a 30" main for a distance of over 5 miles to the Sewage Disposal Works at Saltford—partly by gravitation from a high level system of sewers by way of a tower at the Station, but mainly as a result of direct pumping action. A description of these Works was given in the last Report and need not be repeated here.

**Closet Accommodation.** In some of the outlying parts a certain number of earth closets still remain, and there are a few premises where cesspools are in use. Where the cesspool is sufficiently accessible it is cleared out periodically by the City by means of vacuum pipes. Earth Closets are kept in order by the owners or tenants. In scarcely any instance is it practicable to connect up these premises with the City system.

Generally speaking, however, an adequate system of water closets is in use in the whole area. There were no conversions during 1920.

## SCAVENGING.

Arrangements are made for the weekly removal of all house refuse, which is taken to the Destructor and burnt.

As soon as economic conditions permit, the question of enforcing the substitution of moveable ashbins for fixed receptacles, in those houses where it has not yet taken place, should be considered. In tenement houses in the congested parts of the City, there ought to be a more frequent collection, but this has been difficult to arrange in recent years. The matter is receiving the attention of the Surveying Committee.

## MILK (MOTHERS AND CHILDREN) ORDER, 1919.

The distribution of milk under this Order has meant a great deal of work at the Infant Welfare Centres, at the Health Office, and in the Treasurer's Department. There is little doubt, however, that very material benefit to the infants concerned has

resulted. As a temporary measure, in view of the price of milk and other economic factors prevailing, it has met a real, and sometimes an urgent, need. It is impossible absolutely to eliminate the risk of help being given to people not really needing it, but it is believed that our methods reduce this risk to an almost negligible minimum. The routine adopted includes the following procedures—signature of applicant to written statement of total income, number in family, and amount of rent, the statement being confirmed, or altered, on each renewal; signature of the Medical Officer and a Member of Committee of the Clinic concerned, to indicate their approval; investigation by Health Visitors when necessary; personal sanction by the Medical Officer of Health after due enquiry from Employers, Pensions Officer, or Guardians, made to confirm statement of income; the keeping of a complete record of the details of all applications at the Health Office, and the obtaining of an acknowledgement on the part of recipients to the effect that they have received the milk, in order that Dairymen's accounts may be checked.

Practically all milk is distributed as a result of applications made at the Ante-Natal or Infant Welfare Centres. Exceptionally, the Medical Officer of Health grants a temporary supply, pending subsequent attendance at the Centres. An income limit, which has regard to the size of the family and the house rent, is adopted in connection with applications.

The following figures will be of interest:—

Number of families assisted in connection with Rosewell House Clinic, 93; Walcot, 88; Oldfield Park, 31; Ante-Natal Clinic, 35; Health Office, 1; Total, 248 (Year ending 31/3/1921).

The daily averages during the periods mentioned below were approximately as shewn:—

	March 1920.	Apl.-June 1920.	July-Sept. 1920.	Oct.-Dec. 1920.
Number of individuals receiving milk ..	119	92	71	78
Free ..	78	62	57	69
Half price	41	30	14	9
*Number of "free pints"	145	102	83	86
Cost per day ..	60/3	33/1	25/6	36/-

\*i.e., counting  $1\frac{1}{2}$  pints at half price as  $\frac{3}{4}$  pint, and so on.

The approximate cost of milk for the year ending 31st March, 1919, was £266; for the year ending 31st March, 1920, £579; and for the year ending 31st March, 1921, £614.

Half of this is repaid by Government grant. The amount spent during the financial year 1921-22 is likely to be appreciably less than that during 1920-21.

## MATERNITY AND CHILD WELFARE.

Midwives Acts, 1902 & 1918. The City Council is the local supervising authority under these Acts.

During 1920, 29 Midwives notified their intention of practising within the area, but not more than 19 of these were carrying on their work at the beginning of 1921. Of the other 10, two ceased practice on getting married, one retired after nearly 50 years' service, six left the district, and one was struck off the Roll for misconduct. Only 6 out of the 29 were amongst those who obtained legal recognition in 1901, in virtue of having been in practice at that time and irrespective of training or examination. By the end of the year this number was reduced to 4, one of whom attends scarcely any cases in the City.

Fourteen Midwives practised exclusively in connection with public institutions.

Five institution, and eight other midwives, attended less than 10 cases each.

Of 1,317 Birth Notifications received, 895 came from certified midwives. An analysis of the latter number shews that in 51 cases a doctor was previously engaged, in 183 he was called in at or in connection with the confinement, and in 661 the midwife only was in charge. It is interesting to notice that trained midwives send for medical assistance about half as often again as the untrained ones. This seems to be due to their keener appreciation of possible dangers and should tend to inspire confidence in their judgment.

Medical aid was called in under Rule E. 20 on 188 occasions (in connection with 183 births). 142 of these were for direct complications of labour, 21 of unsatisfactory conditions of infants, and 25 of unsatisfactory conditions of mothers.

62 Stillbirths in all were notified (29 by midwives).



The necessary inspections are made by the Medical Officer of Health. Several breaches of the Rules occurred, but they were for the most part in connection with failure to forward one or other of the Statutory Notices required. Twelve letters on these matters were sent to eight Midwives, and in certain cases the midwife was asked to come to the Health Office in order that the necessary routine might be explained. The name of one woman was removed from the Roll for an offence dealt with by the Police and not coming under the direct cognizance of the Local Authority. One has little hesitation in saying that generally speaking the midwives of Bath are doing thoroughly good work and maintaining a high level of efficiency.

A good deal of consideration had to be given during the year to the provisions of Section 14 of the 1918 Act. This (a) imposes a duty on midwives to send for medical aid when certain emergencies arise, (b) requires the Authority, if asked to do so, to pay the fees of doctors so called in, and (c) allows the Authority to recover such fees from the patient, unless satisfied that the patient is too poor to pay. The right of recovery had never been exercised and both midwives and patients appeared, not unnaturally, to be ignorant of its existence. In consequence, a certain number of people well able to afford the whole or part of the fees incurred, were being paid for by the City. These powers should not be used harshly, nor in a way likely to discourage midwives from calling assistance in any case of doubt, but at the same time reasonable efforts should be made to prevent abuse. Personal interviews and written communications with midwives and doctors are securing their valuable co-operation, and a complete system of sending accounts and following them up has been established at the Health Office. Income limits, varying with the size of the family, determine whether there should be total exemption, payment not exceeding a guinea, or payment of the whole fee. Special cases are reported to the Committee for their decision.

The general arrangements for attending to the health of expectant and nursing mothers, and children under 5 years, include the following :—

**Health Visitors.** Since April, 1920, there have been three whole time Health Visitors—previously one of these had done part time work only. Each Visitor takes charge of

one of the three approximately equal districts into which the City is divided. She also attends at least once a week at one of the three Infant Welfare Centres and it is now arranged that she shall be present on the day allotted to children from her area. It was a little difficult at first to make the necessary adjustments, but experience has shown that they work very satisfactorily.

Visits are paid towards the end of the second week after birth and repeated at gradually increasing intervals until school age is reached. Only a limited number of children born before April, 1918, are now being followed up, but it is intended to keep in touch with those born since until they reach school age.

The Visitors give much appreciated advice to mothers, note and report sanitary defects, weigh the babies, and endeavour to procure their attendance at the nearest Baby Clinic.

They also investigate and report upon cases of **Stillbirths** and, when desirable, of **Infant Deaths**. Action is taken when such reports suggest that it would be likely to do good.

For various reasons the work was a good deal interrupted during the first half of the year, but in spite of this a large number of visits was paid. The figures are :—

To children under one year	..	4592	visits
To children between one and two	..	1546	„
To children between two and five	..	308	„
		<hr/>	
Total	..	6446	„
		<hr/>	

Each Visitor in the course of a full week's work visits between 60 and 70 homes, and in addition spends one or two afternoons at a Clinic.

**Ante-Natal Clinic.** A clinic for giving advice to expectant mothers is held on Wednesday afternoons at the Rivers Street Maternity Home. A definite increase has taken place in the number of attendances, partly associated no doubt with the large increase in the number of births during 1920 as compared with previous years. There is other evidence, however, to shew that the Clinic is becoming better known and appreciated.



This is encouraging since, if it became the custom to have certain quite simple investigations made before pregnancy is far advanced, a considerable proportion of stillbirths and of serious or fatal complications in the mother might be avoided. Both these occurrences are too frequent now, but there is often no means of obtaining information about cases until it is too late to do any real good.

The figures for the year were as follows (1919 figures being added to allow comparisons to be made) :—

	1920.	1919
Number of Sessions .. ..	52	52
New cases at Clinic .. ..	136	103
Second or subsequent attendances ..	69	32
Total ..	205	135
Ante Natal visits to homes by midwives..	822	

Where necessary, arrangements were made for assistance under the Milk (Mothers and Children) Order.

**Maternity Home.** A Maternity Home with five beds was opened in November, 1917, at 44, Rivers Street and has proved of the greatest value to those for whom it was intended. It is impossible in an institution of this kind to make any exact arrangements for admission on particular dates. During the year the five beds were capable of giving 1,830 days accommodation. The fact that beds were actually in use on 1,733 days indicates, to those who appreciate the conditions, an inconvenient overcrowding at times, and this indeed is what happens. There is little doubt that we could do with more beds, but it is scarcely possible economically to extend the present Home. The question remains, therefore, temporarily in abeyance.

The nursing arrangements are carried out under the supervision of the Matron of the Bath and District Nurses' Association, subject to the control of a Committee of the Council, and the general supervision of the Medical Officer of Health. By a suitable financial adjustment with the District Association, the whole of the deficit in the working expenses is borne by the City. Patients are expected to pay such a sum towards their maintenance as they may be able to afford.

The following figures will give an idea of the scope and amount of the work done:—

	1920.	1919.
Number of cases admitted ..	108	75
Average stay in days ..	16	17
Average number in Home each day	4.73	3.52
Cases in which a doctor was engaged	19	
Cases in which a doctor was called in	48	
*Average net cost of maintenance per patient per week, excluding medical attendance, and before deducting receipts from patients	£3 10s. 4d.	£3 11s. 1d.
*The net cost to City, after deducting all receipts and assuming a 50 per cent. grant from the Ministry of Health, was	£229 5s. 10d.	£204 3s. 4d.

**District Midwives.** In conjunction with the Maternity Home there is also a service of midwives available for district work in the greater part of the City. This is intended to supplement the otherwise inadequate number of women practising midwifery. Patients are charged an ordinary fee which, however, may be partly or wholly remitted where circumstances make it desirable.

The arrangements made between the Council and the District Nurses' Association as regards administration and finance, are similar to those in connection with the Home.

Number of Outdoor Midwives ..	4
Number of cases in 1920 ..	406
*Net Cost to City (assuming a 50 per cent. Government Grant) ..	£149 9s. 3d.

\*Year ending 31st March, 1921

## VOLUNTARY SOCIETIES.

**Infant Welfare Centres.** There are three of these established and carried on by the Bath Infant Welfare Association—a voluntary society which has for many years been doing a most beneficent work for the mothers and children of the City. Clinics are held twice a week at Rosewell House, and once a week at Snow Hill, Walcot, and at the Baptist Chapel, Oldfield Park (for Twerton and Oldfield Park). Some idea of

the scope of their activities may be gathered from the following statements: More complete details are given in the Annual Reports published by the Centres.

		Rosewell House.		Walcot		Oldfield Park.
Date opened ..	..	Nov., 1913..	Feb., 1918..	June, 1919		
Clinic afternoons	..	Tues., Fri...	Thurs. ..	Wed.		
Medical Officer	{	Dr. Marsh ..	Dr. ..	Dr.		
	{	Dr. Bevir ..	Harper ..	Heathcote		
Number of Sessions	..	97	..	50	..	45
Attendances of children						
under 2	..	2007	..	—	..	1221
Do. do.2—5	..	560	..	—	..	84
		—		—		—
Total Attendances	..	2567		1647		1305
Number of new cases						
included in above	..	414	..	207	..	148
Average attendance of						
infants per session	..	26.5	..	33	..	29
Cases relieved under						
Milk Order (Year						
ending 31/3/21)	.	93	..	88	..	31
Needlework Classes—						
Number held	..	35	..	38	..	—
Attendances	..	328	..	293	..	—

The Medical Officer, one or two Health Visitors, and several voluntary workers are present at each session. Simple medicines and supplies of chymol, dried milk and other similar preparations, are distributed as may be necessary—generally at cost price. Arrangements were also made in connection with the supply of milk under the Milk (Mothers and Children) Orders. Further reference to this will be found on pp. 12—14. A number of voluntary subscriptions are received and prove a great help in providing certain amenities for which public funds might not be available. For the most part, however, the working expenses are paid by the City, one half of such expenditure being recovered by a grant from the Ministry of Health.

There is a close and cordial relationship between the Voluntary Association and the Health Department. Each Centre is represented on the Maternity and Child Welfare



sub-Committee of the Council, and that Committee is also represented on each of the Voluntary Committees. The Medical Officer of Health is consulted on matters of administration, and the whole time Health Visitors both help at the Clinics and, in the course of their visiting, encourage mothers to bring up their children for advice.

**Day Nursery.** The Bath Day Nursery at 7, Green Park was opened on May 20th, 1920, and is worked in connection with Rosewell House by a Special Committee of the Infant Welfare Association. There is no direct co-ordination, either financial or otherwise, between the City and the Day Nursery.

The figures for the year ending 31st March, 1921 (about 9 months actual work) show that there were 1 323 whole day, and 285 half day, attendances—a total of 1,608. The daily average attendance was 7·7, but it was generally less than this at the beginning and more at the end of the period under review.

The rule is to take children under two only. There is a visiting medical officer. A charge of 1/- a day is made to mothers, which covers the cost of providing the necessary food.

**Co-ordination with School Medical Service.** The fact that the Medical Officer of Health is also School Medical Officer ensures a certain continuity in administration, and arrangements are made for Infant Welfare Centre Cards to be handed on to the School Medical Department as soon as a child reaches school age. Except in these ways the staffs and committees for the two departments have no official connection.

**Puerperal Fever.** Official figures shew that 5 cases were notified and one patient died. There was no reason to suppose that any of them were due to negligence, and no series of cases occurred in the practice of any one person.

Two other deaths also occurred from causes associated with child birth, one following ruptured uterus, and one from pulmonary embolism.

**Ophthalmia Neonatorum,** or inflammation of the eyes of the newborn, is a cause of a large part of the blindness in the Country. Early and skilled attention considerably diminishes the danger. The disease is notifiable

under the Public Health (Ophthalmia Neonatorum) Regulations, 1914, and every case notified is followed up at once by the Medical Officer of Health, or the Health Visitors, to ensure that adequate treatment is being obtained. All cases are treated, either by the patient's own doctor, or at the Eye Infirmary. During 1920, 14 cases were notified (precisely the same number as in 1919). Partial loss of sight is probable in one case, but all the others recovered completely. Valuable help is given by the Bath District Nursing Association.

**Epidemic Diarrhœa.** Six deaths in children under two years were attributed to Diarrhœa, but there was nothing in the nature of an epidemic.

**Poliomyelitis.** No cases were notified.

Statistical details as regards puerperal fever, ophthalmia neonatorum, and all other notifiable diseases, will be found on page 44. **Measles** is also referred to on page 27.

## VENEREAL DISEASES.

Under the Council's scheme provision is made for free treatment at the Royal United Hospital. Three clinics are held each week from 5 to 7 p.m., on Tuesdays for women and on Thursdays and Saturdays for men. Treatment can also be given at any other time, day or night if necessary, but although the facilities are there patients seldom come except at the stated hours. The cases dealt with are mainly those from Bath, and from the neighbouring parts of Somerset and Wilts. The Hospital pays all expenses and makes a pro rata charge on an agreed scale to the Authorities concerned, the City's share being rather more than half the total.

The Clinics are well attended and there is good reason to think that very valuable curative work is being done. Every reasonable effort is made to secure conditions of secrecy. Venereal Disease, however, may be acquired innocently, and similar symptoms may be caused by other diseases. It is important, therefore, that public opinion should be led to recognise that attendance at the Clinic is in no way equivalent to a charge of immorality. It is, on the contrary, often evidence of a laudable desire for investigation which may safeguard the health, not only of the individual concerned, but of others as well.



It should be widely known that sufferers can receive free treatment at any clinic they care to attend in any part of the Country, and are not in the least bound to the one in their own town.

The provision made appears to be adequate, and no material extension or modification is needed at present. The cordial co-operation of the medical profession in the City has been obtained. As regards the readiness of patients to avail themselves of the facilities offered, the difficulty, of course, is to convince them of the foolishness of relying on their own judgment, rather than that of the doctor, in deciding when they are cured. In no other disease is this likely to lead to more disastrous results. It is interesting to note, however, that although the number of new patients in 1920 was approximately the same as in 1919, the number of attendances increased by nearly 50 per cent. It is quite impossible to say what proportion of people contracting the disease actually obtain treatment, but in these days it is reasonable to hope that it is fairly high.

An indication of the amount of work being done is given by the following figures, the 1919 figures being added to enable comparison to be made :—

	1920.	1919
Number of new patients .. ..	169	179
Total number of out-patient attendances	1937	1317
*Average cost of each attendance ..	6/-	—
Total number of "In-patient days" ..	654	95
*Maintenance charge per day.. ..	7/6	7/6
Number of doses of Salvarsan substitutes	529	278
*Total cost of Clinic .. ..	£730	£778

Notes. \*Year ending 31 3/21.

75 per cent. of cost is repaid by Government grant.

All the above figures refer to Bath only.

The figure £410 given in last year's report was an error and should have been as now stated.

For details as to number of pathological examinations made see page 29

In addition to treatment obtained through facilities offered at the Clinic, 13 cases have been treated by four medical men in the City who, after application to the Council, have been recognised under the Public Health (Venereal Disease)

Regulations, 1916, as being qualified by special experience to receive Salvarsan substitutes free of charge for use in their own practices.

The number of pathological examinations made for diagnostic purposes at the request of private practitioners in the City during 1920, was 26.

There were no prosecutions under the Venereal Disease Act, 1917.

The local Branch of the National Council for Combating Venereal Diseases has undertaken valuable propaganda work from time to time and receives grants for this purpose on the recommendation of the Health Committee.

## TUBERCULOSIS.

The Council's scheme includes Dispensary and Sanatorium treatment.

The Dispensary situated at 26, Charles Street and opened in 1913, is administered entirely by the Somerset County Council, one of whose Medical Officers attends every Monday and Friday. It is at the service of all City cases, insured and non-insured, and also of a few County patients living outside the boundary. The whole cost is charged to the City, except that in respect of County cases a pro rata deduction based on attendances is made. This amounts to approximately one-tenth of the total. During the year ending 31st March, 1921, the sum paid to the County for all City patients was £620, of which £308 was for medical attendance and £212 for drugs and medical requisites.

In connection with the Dispensary there is a Tuberculosis Health Visitor working exclusively for the City. All cases, as far as possible, are followed up at regular intervals, advice given, sanitary defects noted, and an effort made to induce any member of a patient's family who may show the least suspicion of tuberculosis to attend at the Dispensary for examination.

	Bath Insured.	Bath Uninsured.	County.
New Cases ..	116	158	43
Return Visits ..	753	1537	275

**Sanatorium** treatment for early cases is available at Winsley.

In 1920 six beds were owned by the City and were used for non-insured patients. In addition, a temporary arrangement with the Winsley Committee allowed a varying number of beds, usually from 4 to 8, to be occupied by insured patients. (Considerable changes took place early in 1921. The City purchased 8 more beds and assumed the responsibility of dealing with insured, as well as non-insured patients). All City beds have to be paid for whether occupied or not. In this connection it was found necessary to reorganise completely the routine for admission and discharge, and as a result, the average interval between the departure of one patient and the arrival of another was reduced from about 17 days to less than one. The system was easily and automatically extended to the increased number of beds taken over in 1921.

	Insured.	Non-insured.
Patients discharged during 1920	45	18
Average length of stay in weeks	11	12.5
Children under 14 years of age (included above)	—	11

**Insured Patients.** Arrangements for these were in the hands of the Bath Insurance Committee, who repay to the Council an agreed sum to cover expenditure incurred on their behalf.

**Other Agencies.** About 20 Bath cases of tuberculosis of different kinds were treated at the Royal United Hospital, but no payment was made for this by the City. It is probable that in future some working arrangement with the Hospital will have to be considered by the Council.

The School Medical Department is in close touch with the Dispensary. The Tuberculosis Officer is consulted as to the time during which exclusion from school is desirable, and gives advice as to the need for extra nourishment, and so forth.

**Notifications and Deaths.** The number of new cases notified as suffering from Pulmonary Tuberculosis was 151, and from other forms 31. A detailed analysis of these figures will be found on page 44, and comparisons with previous years on page 5. Of the 54 people stated on death certificates to have died of the disease in 1920, only 35 (65 per cent.)



appear in the Register of notified cases, and information with regard to 9 of these was received less than 3 months before they died. The death-rate from Pulmonary Tuberculosis per 1,000 population was 0·64 as compared with 0·76 in 1919, and about 0·95 for the previous eight years. The corresponding rate for England and Wales in 1920 was 0·84. An analysis of the ages and sex of fatal cases is given on page 46.

General Observations. The medical profession in Bath co-operate cordially in the work of the Dispensary.

Extra nourishment was provided for certain insured patients living at home, and an extension of this assistance is contemplated in 1921.

The Council's scheme works well as far as it has been developed, but it will be gathered from what is now to be said that much yet remains undone. Amongst other things the Ministry ask for specific information as regards special methods of diagnosis and treatment in use; nature and extent of any dental treatment provided by the Council; arrangements for treating Tuberculosis of Bones and Joints in adults and in children, and provision of surgical apparatus; arrangements for finding employment for patients; and supply and supervision of shelters at the homes of patients. A few cases of Bone and Joint Disease are dealt with at the Royal United Hospital, but owing to the pressure on the beds it is impossible to keep them in long enough for adequate treatment. By the kindness of a few interested donors from Lansdown, one hut has been generously placed at the disposal of the Medical Officer of Health. Apart from these facts, however, the questions raised must all be answered in a purely negative sense.

The statements made in the last Report still hold good. (1) There is no institutional treatment provided by the City for other than very early cases. (2) Little or nothing is done to get children away from the conditions under which they have developed the disease. (3) The problem of After-Care, from an economic point of view, is scarcely touched. During the year a determined effort was made to remedy (1). Sites were inspected, schemes considered, plans drawn up, and eventually a complete scheme for a 20 bed Sanatorium evolved. The consent of the Ministry of Health was obtained and then, in view of the

economic situation in 1921, withdrawn, the whole undertaking having for the present to be abandoned. It should be recognised that it is from sheer necessity and not from any desire of the Ministry, or lack of keenness on the part of the Health Committee in their efforts to safeguard the health of the City, that progress has been retarded in this and in other measures having similar objects in view. Although rigid economy is admittedly essential in these days, one might venture, perhaps, to express the hope that public opinion may soon discriminate a little more nicely between spending nothing—which may be culpable extravagance—and spending wisely, which is true economy. For the time being the only thing to do is to make the best possible use of agencies already established, and to prepare the ground for a vigorous campaign when the financial situation becomes easier.

## INFECTIOUS DISEASES.

**Prevalence.** Except for a widespread epidemic of Measles there was no abnormal prevalence of notifiable infectious disease in Bath during 1920. Exact figures are given in the various Tables. On page 44 an analysis of notifications received and cases removed to Hospital is made as regards age, sex, and locality. On page 5 notifications, attack-rates, deaths, and death-rates, are summarised and compared with similar figures for previous years. The following additional notes will be of interest:—

**Diphtheria.** The number of cases (65) and the mortality (3 deaths) were both slightly below the average. Making allowance for the population, only half as many people were attacked in Bath as in the Country as a whole (0.95 instead of 1.86 per thousand). Antitoxin is used at the Statutory Hospital as a routine, and is supplied free to practitioners when necessary.

**Scarlet Fever.** Figures correspond closely with averages for the last few years. In this disease also the incidence rate was only half that of the Country generally (1.56 instead of 3.19 per thousand).



**Enteric Fever.** Three of the five cases notified occurred within a few days of each other in a large boarding school on the outskirts of the City. All were paratyphoid B., and all recovered. Prompt measures to deal with the outbreak were taken and careful investigations made, but no definite source of infection could be found. Several serious defects in connection with the storage tanks for water, however, were pointed out, and these were immediately remedied by the School Authorities. No further cases were reported.

**Measles.** A widespread epidemic occurred during the second half of the year. The disease is not now notifiable and exact figures are not available. Careful enquiries, however, suggest that there were not less than 2,000 cases. Fortunately only 7 deaths resulted, a very much smaller number than would have been expected a generation ago. The lessened mortality is probably due in no small measure to a better appreciation by parents of the fact, that the way to avoid serious complications in Measles is to treat the disease seriously. Sixteen of the twenty infant departments of elementary schools were closed for periods varying from 2 to 6 weeks—rather from an administrative point of view, than in the hope of checking the epidemic. No special measures as regards nursing or hospital accommodation were adopted.

**Encephalitis Lethargica.** Two cases were notified, both males, the ages being 33 and 28. The former recovered, the latter died. As is usual in this disease, no source of infection was discovered and the patients were in no way connected with each other.

**Public Health (Pneumonia, Malaria, Dysentery, &c.) Regulations, 1919.** Cases notified under these Regulations were:—Pneumonia, 33; Malaria, 15; Trench Fever, 1.

**Influenza.** Seventeen deaths were attributed to this disease. Careful and rather elaborate preparations were made early in the year to deal with an epidemic if it should arise, but fortunately they proved to be unnecessary.

**Small-pox, Polio-myelitis, Cerebro-Spinal Fever, Anthrax, Rabies.** As far as is known, the City was entirely free from all these diseases throughout the year.

No Vaccinations were performed by the Medical Officer of Health under the Public Health (Small-pox Prevention) Regulations, 1917.

### Isolation, Disinfection, and "Contacts."

Diphtheria. No patient was discharged from the Statutory Hospital until two consecutive throat swabs had proved negative. In the case of elementary school children the School Medical Officer requires another negative swab before readmission to school, and all contacts of school age are excluded until a swab, taken not less than 10 days after the last risk of infection, has proved negative.

Bacteriological examinations are made in connection with any doubtful throat cases seen at the School Clinic. The City undertakes to report upon swabs sent in by private practitioners.

Scarlet Fever. No patient or contact is readmitted to an elementary school until after an examination at the appropriate time by the School Medical Officer.

Disinfection of rooms occupied by patients suffering from either disease is carried out as soon as the patient is removed to Hospital, or is stated by the doctor to have recovered.

Arrangements can always be made for disinfection of rooms and the sterilisation by steam of clothing and other articles, in the case of other diseases where this is desired. Requests for this to be done are frequent.

Every facility for the disinfection of persons and clothing infested with vermin is provided at the Disinfecting Station at the Destructor Works, including hot baths, dressing room and so forth. 37 persons were cleansed during 1920, chiefly in connection with Scabies.

### HOSPITAL ACCOMMODATION FOR INFECTIOUS DISEASES.

This is provided at the Statutory Hospital on Claverton Down. About 70 patients can be accommodated, including a certain number of private patients in separate wards. Scarlet Fever and Diphtheria are the main diseases treated, but when necessary it is possible to admit, and satisfactorily to isolate, Typhoid, Cerebro-spinal Fever, Small-pox, or other infections.

The number of beds provided appears to have been adequate to the needs of the City.

The Medical Officer of Health acts as Medical Superintendent of the Hospital, while the actual treatment of the patients is in the hands of Dr. Collins.

Infectious cases from the Bath Rural District and from the Guardians are also admitted for treatment, at a charge agreed upon between the authorities concerned.

	Cases admitted.		Deaths.	
	City.	Rural.	City.	Rural.
Scarlet Fever ..	87	38	—	1
Diphtheria ..	53	38	2	2
Typhoid Fever ..	3	—	—	—

Average daily number of patients for year, 27·8.

Highest daily average for any one month, 45 in March.

Lowest daily average for any one month, 15 in December.

Net Cost of Hospital to City, year ending 31st March, 1921,  
£2,884.

### PATHOLOGICAL EXAMINATIONS,

The following table indicates the nature and extent of the examinations made during 1920, and also the places where they were undertaken :—

Examinations for		Positive,		Negative.		Total.
a. Diphtheria Bacillus	..	34	..	428	..	462
ab. Gonococcus	..		..		..	148
b. Spirochetes	..		..		..	34
a. Wasserman Reaction	..		..		..	544
a. Widal Typhoid Reaction	..	3	..	5	..	8
a. Typhoid Bacillus—in excreta			..	3	..	3
c. Tubercle Bacillus	..		..		..	*
d. Ringworm Fungus	..		..		..	*

a. Bristol University Pathological Department.

b. Royal United Hospital (Venereal Disease Department).

c. Somerset County Laboratory.

d. School Clinic.

\* Exact numbers not available. In the case of Tubercle, sputum from all new cases at the Dispensary is examined as far as possible, and 49 examinations were made at the request of private practitioners.

For Tuberculosis see page 23.

For Venereal Diseases see also page 21.



## HOUSING.

The total number of houses in Bath is about 16,000, of which some 12,000 are "for the working classes." In the scheme submitted by the Council to the Ministry of Health, and approved by them, it was estimated that to meet the unsatisfied demand for houses and to provide accommodation for families who will ultimately be displaced by the demolition of unfit and obstructive houses, 398 new ones would be required. This number it is proposed to erect as soon as general conditions allow. Most of them will be on land already acquired near Englishcombe Lane and the first batch of 74 were in hand by the end of the year.

There is very little technical overcrowding in Bath, the chief difficulties being rather unsuitability of houses and the fact that many of the smaller houses are inhabited by two or more families. Where overcrowding has been found, it has been dealt with as far as possible by notices served on the occupiers.

In the Scheme already referred to, it was stated that 250 houses were regarded as unfit for human habitation and 979 as seriously defective. Many of the former are very old and below flood level, the defects being dampness, defective walls, floors, and roofs, and general dilapidations.

During the year one district was represented under Part 1 of the Housing Act of 1890, as being an unhealthy area (Little Corn Street, Back Street, and Quay).

The following general statement as to the work done, difficulties encountered, and the methods of procedure, has been supplied to me by the Chief Sanitary Inspector, Mr. Craven.

"In consequence of the serious lack of accommodation, we cannot deal with existing houses as we should like. Having regard to the present scarcity of houses and the general state of affairs relating to housing, the time appears very remote when many houses already "worn out" can be closed and demolished. In addition to the houses that require closing and demolishing, there are many that require thorough renovation, which cannot be done satisfactorily while occupied. It will probably be several years before any extensive demolition and clearance of slum areas can be carried out and in the meantime existing houses must be repaired and made reasonably fit for occupation, so as to provide accommodation until better houses are ready to take their place.



About 1600 inspections were made during the year and the minimum repairs have been carried out, though in a few instances extensive alterations have been made and the owners have done more than requested. The shortage of good houses is very acute, and many houses which would have been dealt with under the Housing Acts a few years ago have been brought up to a tolerably good standard of repair, as they will probably be occupied as dwellings for several years. Where property of this description has been renovated, the owner is always informed that the house will probably be dealt with under the Housing Acts when the position becomes easier.

In the central area of the City (already scheduled as an insanitary area) it was considered inadvisable to put individual houses into thorough repair and our endeavours have been to prevent them getting into any worse condition. Slum patching is bad policy and always to be deprecated, but the times are abnormal and we are doing our best in the circumstances. As soon as accommodation is available it will be possible to commence to deal with the occupied unfit houses.

Practically all action taken has been under the Public Health Acts, though in many cases repairs have been executed without the service of notices. It has been found impracticable to apply the standard of the Ministry of Health, as laid down in the Manual for dealing with unfit houses, to old and dilapidated property. Attention has been directed principally to remedying dampness caused by defective roofs, eaves gutters, and down-pipes; defective drains and sanitary conveniences; lighting and ventilation, and general repairs. Conditions which have been regarded as irremediable have been "serious dampness of a progressive nature," as referred to in the Ministry's Manual, and where the insertion of a damp proof course would be necessary, or houses where the lower floors are rendered constantly damp by ground water. Where these conditions exist, together with general dilapidations, in houses of a low category, I think it is preferable to wait until they can be demolished, rather than patch up and perpetuate a bad type of dwelling."

# **REPORT of the INSPECTOR OF NUISANCES.**

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**TO THE MAYOR, ALDERMEN & COUNCILLORS OF THE  
BATH CITY COUNCIL.**

**LADIES AND GENTLEMEN,**

I herewith submit my report as Inspector of Nuisances for the City of Bath on the work of my department during the year 1920. The number of visits to premises, including inspections, re-inspections, supervision of work in progress, etc., was 9897. The work carried out includes house inspections, the investigation of complaints of nuisance, the inspection of Common Lodging Houses, Slaughter-houses, Bakehouses, Canal Boats, Dairies, Cowsheds and Milkshops, Factories, Workshops, Workplaces and Outworkers' Premises, Houses in which Infectious Disease has occurred and the disinfection of rooms and clothing after such disease. It will be seen from the above that the activities of the department cover a wide field, which has been considerably extended in recent years by the development of Public Health legislation. Endeavours have been made to keep pace with the demands made and attention has been given to each branch of the work according to its importance. The usual practice has been continued of communicating with the Owner or Agent immediately upon the discovery of any sanitary defects and supplying particulars of the work necessary to remedy the same. Experience has proved that it is easier to get nuisances abated promptly and more willingly by at once getting into touch with the responsible person, than by the service of a notice. In all 82 nuisances were abated and 14 W.Cs. renewed or improved as the result of interviews. All recommendations are supervised in the same manner as the work carried out under Notice.

It is gratifying to record that it was not necessary to institute legal proceedings to enforce compliance with Statutory Notices. 354 "Preliminary," or informal notices, and 39 Statutory Notices, were served. The following is a summary of sanitary work, etc., executed during the year:—

### SUMMARY OF SANITARY WORK, ETC., 1920.

- 9897 inspections, visits of enquiry, etc., were made.
- 1378     ,,         of Slaughter Houses were made.
- 269     ,,         of Dairies, Cowsheds, &c., were made.
- 274     ,,         of Common Lodging Houses were made.
- 39     ,,         of Canal Boats were made.
- 312     ,,         of Factories, Workshops, &c., were made.
- 19     ,,         of Outworkers Premises were made.
- 62 inspections of Offensive Trade Premises were made.
- 864     ,,         under Shops Acts were made.
- 79     ,,         of Places of Public Entertainment were made.
- 96     ,,         of Piggeries were made.
- 323 houses were disinfected after infectious disease.
- 354 Preliminary or Informal Notices were served.
- 39 Statutory Notices were served.
- 90 Notices requiring structural works to abate nuisances were issued.
- 54 Notices requiring cleansing of premises were issued.
- 14     ,,         ,,         ashbins to be provided were issued.
- 6     ,,         ,,         removal of manure, etc., were issued.
- 24     ,,         ,,         limewashing of slaughter houses were issued.
- 84     ,,         ,,         limewashing of Dairies, etc. were issued.
- 12     ,,         ,,         limewashing of Common Lodging Houses, &c., were issued.
- 63 Notices under the Gooseberry Mildew Order were issued.
- 63     ,,         ,,         Wart Disease (Potatoes) Order were issued.
- 405 Smoke or other tests applied to drains, etc.
- 65 New drains were laid.
- 83 Drains were partially reconstructed.
- 28 New W.Cs. were erected.
- 7 additional W.Cs. were provided.



161	Nuisances from defective drains, soil pipes, etc., were abated.		
112	„	„	„ W.Cs. and Urinals were abated.
63	„	„	„ rain water pipes, etc., were abated.
110	„	„	„ roofs, walls, etc., were abated.
39	„	„	„ dishtroughs, lavatory basins, &c., were abated.
92	„	„	„ waste pipes, etc., were abated.
99	„	„	„ paving and floors were abated.
3	„	„	„ cesspools were abated.
10	„	„	„ or improper water supply were abated.
15	Nuisances from defective ventilation of premises were abated.		
2	„	„	„ overcrowded premises were abated.
13	„	„	„ animals kept so as to be a nuisance were abated.
5	Nuisances in Common Lodging Houses were abated.		
9	„	„	„ in Slaughter houses were abated.
11	„	„	„ in Dairies, Cowsheds, etc., were abated.
33	„	„	„ in Factories, Workshops, and Workplaces, were abated.

### INCREASE OF RENT, &c , ACT, 1920.

Under the Increase of Rent and Mortgage Interest (Restriction) Act, 1920, twenty-six applications were received from tenants for a certificate or report that the house in their occupation was not in all respects reasonably fit for human habitation, or was otherwise not in a reasonable state of repair. All applications under this Act were reported to the Health Committee for consideration.

Twenty-five certificates were granted and in one case it was not granted. Several informal applications were made and in these cases an inspection of the premises was made and the owner informed of the result of the inspection. In most of the cases where this plan was followed, the necessary repairs were carried out. The standard of reasonable fitness has been defined as "the house to be dry, in a reasonable state of repair and cleanliness, with similar sanitary amenities as in August, 1914." A house which complied with this standard would be considered as one for which a certificate would not be granted.



## FACTORIES, WORKSHOPS AND HOMEWORK.

### 1.—INSPECTION (including Inspections made by Sanitary Inspectors or Inspectors of Nuisances).

Premises.	Number of	
	Inspections.	Written Notices.
Factories (including Factory Laundries) .. ..	14	8
Workshops (including Workshop Laundries) .. ..	203	21
Workplaces .. ..	95	4
Total .. ..	312	33

### 2.—DEFECTS FOUND.

<i>Nuisances under the Public Health Acts :—</i>		Number of Defects	
Particulars.		Found.	Remedied
Want of Cleanliness .. ..	..	16	all
„ Ventilation .. ..	..	2	„
Overcrowding .. ..	..	1	„
Drainage of Floors .. ..	..	1	„
Other Nuisances .. ..	..	7	„
Sanitary accommodation	{ insufficient .. ..	1	„
	{ unsuitable or defective .. ..	5	„
Total .. ..	..	33	

### 3.—OTHER MATTERS.

Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts but not under the Factory Act (s. 5)	Notified by H.M. Inspector ..	Number 15
Reports (of action taken) sent to H.M. Inspectors ..		15
<i>Underground Bakehouses</i> (s. 101):—In use at the end of the year .. ..	..	14
<i>Homework: List of Outworkers</i> (s. 107):—	Lists. Outworkers	
Lists received—Wearing Apparel, making .. 10	..	32
Notices served on Occupiers as to sending Lists .. ..	.. Nil	
<i>Inspection of Outworkers' Premises</i> :—	Instances. Notices served	
In Unhealthy premises (s. 108)	Nil	
<i>Workshops on the Register</i> (s. 131) at the end of the year:—		
Total at end of 1919 .. ..	..	483
Added to Register in 1920 .. ..	..	15
Total number of Workshops on Register ..		498

## FACTORIES, WORKSHOPS AND WORKPLACES.

The total number of Workshops, etc., on the Register at the end of the year was 498. The many changes in occupation and in the nature of the work carried on, especially in the smaller workshops, which have taken place during, and since the War, have rendered the old Register of very little value and a new one is in course of preparation. The number of inspections of premises which come within the scope of the Act was 312. The majority of the workshops were in a satisfactory condition and in only 24 instances was it necessary to serve notices upon the owners or occupiers to remedy defects. In 9 cases the attention of the occupiers was called to various minor defects and in every case the necessary works were carried out without formally reporting the matter to the Health Committee.

Fifteen notices (3 relating to Factories and 12 to Workshops) were received from H.M. Inspector of Factories with respect to sanitary defects which were remediable under the Public Health Acts. Seven of these had reference to dirty walls and ceilings, and seven to unsatisfactory or insufficient W.C. accommodation. In addition to the above, 17 other nuisances caused by want of ventilation, overcrowding, defective drainage, etc., were abated.

Fifteen notices of occupation of workshops were received and after inspection, these were placed upon the Register.

Eight lists were received from employers containing the names of 28 outworkers, i.e., persons who receive from the occupier of any factory or workshop, work to be done in their own homes. No insanitary conditions were found in any homemaker's premises, nor was any case of infectious disease notified as occurring in any house where "homework" was carried on.

## SHOPS ACTS.

Under the above Acts and the various Orders made thereunder, over 750 inspections and visits were made during the year. Practically the whole of this work has to be done during the half-holiday and in the evenings. There seems to be a general disposition on the part of the shopkeepers to carry out the requirements of the Acts, but there are many

who studiously try to evade the law, and considerable attention has to be given to certain localities. In 63 instances warnings, either verbal or written, had to be given to offenders. There were very few breaches of the half holiday Orders and the infringements were principally in connection with "Mixed Shops" and had relation to the display of proper notices as required by the Act. The Section of the Act with respect to the provision of seats for female shop assistants, in the proportion of not less than one seat for every three assistants employed in each room, is satisfactorily complied with on the whole.

### CANAL BOATS ACTS.

Thirty-nine inspections of Canal Boats were made during the year, which number is considerably below that of any previous year. This falling off is almost entirely due to the small number of boats now used as dwellings and to the decline in the use of Canal Boats as a means of transit. Most of the boats inspected were those of local traders and the men employed thereon do not usually use them as sleeping places. There were 55 boats on the local register and of these 41 cannot be traced, and it is probable that most of them have been broken up or have ceased to be used as Canal Boats.

There were no infringements of the Acts or Regulations on any of the Boats used as dwellings. The attention of two owners was called to minor defects, which were remedied without the service of a notice. Since 1914 no boat has come under my notice where women or children were living on board.

With regard to other matters on which the Ministry desires information--there was no overcrowding on any boat; there was no case of infectious disease, nor was it necessary to detain any boat for cleansing or disinfection. I have never been refused admittance to any boat and any suggestions I have made have been readily complied with.

No boat was registered during the year, nor was any fresh registration necessary in any case on account of structural alterations in boats previously registered.



### COMMON LODGING HOUSES.

The number of registered Common Lodging-houses remains the same as last year, that is five. These houses have been kept under regular supervision and 274 inspections were made. With one exception they were found to be well conducted and in a moderately clean condition. Scrupulous cleanliness is essential in a well conducted common lodging-house, but this is very difficult to secure. There has been a marked falling off in the number of persons seeking accommodation in these houses and it is very exceptional to find any one of them fully occupied. The bye-laws with respect to limewashing, etc., have been observed. A few minor defects, such as defective paving floors, roofs, and ceilings, were noted, but all these were remedied without delay. No case of infectious disease was notified as having occurred in a common lodging-house.

### SLAUGHTER HOUSES.

There are 21 private slaughter-houses in the City, 19 registered and 2 licensed. I am pleased to report that one slaughter-house, which was closely surrounded by dwellings, was demolished during the year in connection with the extension of business premises. Several of the slaughter-houses have not been in regular use for some time, the majority of the cattle being slaughtered in about 12 of them. Considering the great number of years most of these premises have been in use, they are kept as well as their structural condition allows, and the bye-laws with respect to limewashing, cleansing, removal of refuse, etc., have been complied with. I have not received any complaint of nuisance from residents respecting any one of them.

The following defects were brought to the notice of the occupiers: 1 obstructed drain, 3 defective floors, 2 defective walls, 1 insufficient ventilation to lairage, and 1 defective roof. These were at once remedied without the service of notices.

Although the slaughter-houses are widely scattered, every possible effort is made to visit them when slaughtering is taking place, and in all, 1,378 visits were made for the purpose of inspecting the carcasses and premises. The Butchers generally are fully alive to the importance of securing a complete inspection of the slaughtering of animals by your officials and have



rendered assistance to this end during the year by calling attention to doubtful and diseased carcasses. Their ready co-operation and assistance has been most helpful. The quantity of meat condemned as unfit for human consumption was 2 tons, 1 qrs. 6 lbs., or about  $4\frac{1}{2}$  tons less than in the previous year. This decrease must not be taken as an indication that the inspection of the carcasses of meat has been relaxed in any way, but rather to the fact that under somewhat improved conditions a better class of animal has been slaughtered and better refrigerated meat put on the market.

In all cases of diseased animals the whole of the internal organs, mesenteric fat, etc., were destroyed, and in 23 cases where the carcase was passed as sound, the offal was destroyed.

### **PIG-KEEPING.**

Early in the year the Board of Agriculture and Fisheries issued a circular to Local Authorities requesting that they should continue to give encouragement to the keeping of pigs and poultry. This was, in effect, an extension of the Defence of the Realm Regulation, which empowered Local Authorities to relax the bye-laws with respect to pig-keeping. Only one application was received during the year and after an inspection of, and report upon, the premises, permission was granted. Nine persons are keeping pigs under the above condition and 96 inspections were made of the piggeries or styes, when they were found generally free from nuisance. Limewashing and disinfecting were recommended in two instances which were promptly carried out.

### **DAIRIES, COWSHEDS AND MILKSHOPS ORDERS.**

269 inspections were made of premises under the above Orders. The conditions under which the cows and cowsheds are kept are much the same as in former years. Several of the sheds need to be improved or rebuilt, but until labour and building materials become cheaper the provision of new cowsheds will be delayed. The Regulations relating to cleanliness, limewashing and general sanitation, have been complied with satisfactorily, on the whole, and no effort has been spared to impress upon occupiers the great importance of cleanliness in every detail connected with the milk supply. The following defects were noted and remedied:—1 defective drain: 5 accumulations of manure; 3 defective floors; and 3 limewashing required.

**LIST OF FOOD CONDEMNED AND DESTROYED AS BEING  
DISEASED, UNSOUND, Etc., DURING THE YEAR, 1920,**

Meat	Weight in lbs.	Fish	Weight in lbs.
Beef (fresh) ..	.. 2,310	Cod ..	.. 392
Beef (refrigerated) ..	.. 185	Hake ..	.. 392
Mutton (fresh) ..	.. 81	Herrings (fresh) ..	.. 5,603
Mutton (refrigerated) ..	.. 1,823	Herrings (kippered) ..	.. 3,030
Pork ..	.. 105	Herrings (salted) ..	.. 504
Tripe ..	.. 10	Mackerel ..	.. 840
		Pollack ..	.. 1,596
		Whiting ..	.. 336
		Coal Fish ..	.. 588
		Prawns ..	.. 84
		Shrimps ..	.. 180
		Skate ..	.. 672
Total weight—	<u>          </u>	Total weight—	<u>          </u>
2 tons, 1 qr., 6 lbs.	<u>          </u>	6 tons, 6 cwts, 3 qrs., 21 lbs.	<u>          </u>

Miscellaneous Goods	Weight in lbs.	Tinned Goods	Number of Tins
Butter ..	.. 58½	Condensed Milk ..	.. 180
Margarine ..	.. 4½	Herrings in Tomatoes ..	.. 16
Lard ..	.. 6	Jam ..	.. 8
Cooked Corned Beef ..	.. 67	Salmon ..	.. 26
Potatoes ..	.. 9,184	Marmalade ..	.. 1
Fruit Cakes ..	.. 9	Meat Paste ..	.. 14
Total weight—	<u>          </u>	Peaches ..	.. 1
4 tons, 3 cwts, 1 qr., 5 lbs.	<u>          </u>	Pears ..	.. 1
		Pineapples ..	.. 2
		Pickles ..	.. 3
		Sardines ..	.. 67
		Tomatoes ..	.. 59
		Coffee & Milk ..	.. 1
		Mincemeat ..	.. 3
		Preserved Fruit ..	.. 3
		Lenon Cheese ..	.. 1
		Soups ..	.. 3
Crabs ..	.. 3 boxes		<u>          </u>
Eggs ..	.. 509	Total number of Tins	389
Eggs (tinned) ..	.. 790 lbs.		<u>          </u>

## SALE OF FOOD AND DRUGS ACTS, etc.

During the ten months of the year subsequent to the appointment of Dr. Cook as Public Analyst, seventy samples were purchased and submitted for analysis under the above Acts. The articles analysed were:—Butter, 6; Coffee, 4; Cream (preserved), 1; Lard, 4; Margarine, 11; Milk, 41; Pepper, 3.

The average quality of the 41 samples of Milk was:—Fat, 3·94; Solids not fat, 8·69. The minimum standard fixed by the Board of Agriculture for genuine milk is:—Fat, 3·0; Solids not fat, 8·5. Nine samples were certified by the Analyst as being deficient either in fat or Solids not fat. The average composition of these “adulterated” samples was:—Fat, 3·9; Solids not fat 8·36. As each of the nine was only slightly below the recognised minimum no legal proceedings were taken, but after consideration by the Committee, the vendors were cautioned. Circulars were issued to the dairymen and milk-sellers reminding them that it was illegal to add any preservative or colouring matter to milk. All the samples of milk were free from any chemical preservative, but one was reported to contain “traces of vegetable colouring matter.” In this instance the vendor was cautioned and subsequent samples were found satisfactory. The sample of preserved cream was taken under the Milk and Cream Regulations 1917, and contained less than 0·5 per cent. of Boric preservative. The various other samples were reported as genuine.

Two samples of Margarine and one of butter contained 16 per cent., or the maximum amount permissible of moisture, and all contained Boric preservative, but not in excessive amount.

### Butter and Margarine Acts.

One dealer was registered for the whole-sale sale of Margarine. The attention of two vendors was called to the provisions of the Acts respecting the proper marking of Margarine. The requirements as regards labelling packages and the use of marked wrappers have been generally complied with, and the necessary records of sales by wholesale dealers appear to have been kept properly.



### **PLACES OF PUBLIC ENTERTAINMENT.**

A Circular was issued in August by the Ministry of Health which required Theatres, Music Halls, and other places of public entertainment to be visited by the Sanitary Inspector, who has to report both to the Local Authority and the Licensing Authority any cases in which the conditions are found to be unsatisfactory. The Ministry also suggest "that when considering an application for the grant or renewal of a license in respect of any place of public entertainment the Licensing Authority should require a certificate from the Sanitary Inspector that the condition of the building is satisfactory in sanitary and other respects, and if they desire to grant or renew the licence they should attach such conditions to it as will ensure the building being maintained in a proper state."

There are 36 licensed places of public entertainment in the City—29 various halls and 7 parks and gardens. Frequent inspections have been made of the music halls and cinemas and many of the other halls have been visited at irregular intervals. In all 79 visits were made during the four months following the issue of the Circular, when the premises were found generally in a fairly satisfactory condition. In two instances defective sanitary fittings were discovered and certain dressing rooms were found insufficiently ventilated. These defects were remedied as soon as they were brought to the notice of the proprietors. The inspections under this circular will doubtless have the effect of raising the standard of cleanliness and sanitation of the places of amusement, as it enables one to get minor improvements carried out before the conditions become a "nuisance" under the Public Health Acts.

### **PUBLIC HOUSES.**

In February I was called before the Licensing Justices with respect to the lavatory accommodation in Public Houses and was requested to make an inspection of these premises and to do all that was possible to bring about improved sanitary conditions. 98 Public Houses were inspected, and in 18 of these suitable additional sanitary accommodation was provided, and in 11 others various improvements were effected. Many of the licensed houses are old and the sanitary accommodation cannot be said to comply with modern requirements. Much requires to be done, and I hope it will be possible to resume this work at an early date.



### **RATS AND MICE (DESTRUCTION) ACT, 1919.**

The duties under this Act have been principally in connection with the examination of drains and sewers in, or near to, rat infested premises. Numerous complaints were received and during certain months of the year at least four per week came in. All complaints were thoroughly investigated and in the great majority of cases defects were found in the drain or sewer. The number of rats has been considerably reduced in some areas by the reconstruction of the drains, etc., and by the use of poison baits. The greatest difficulties are those in connection with the numerous disused culverts and arches in the older parts of the City. These provide adequate shelters for numberless rats and where in addition, the rats have access to a plentiful food supply, the problem of reduction becomes serious. Many of the premises examined and treated are in badly infested areas and continuous efforts have to be made to effect an improvement, but even in the worst cases, persistent efforts with varying baits, supplemented by trapping, have been fairly successful.

In July, H.M. Inspector from the Ministry of Agriculture visited the City to enquire as to the action taken under the above Act. The position and difficulties were explained to him, and his advice was to urge upon all the adequate rat proofing of premises, especially food stores, wherever practicable.

### **DESTRUCTIVE INSECTS AND PESTS ACTS.**

Under the **Wart Disease of Potatoes Order, 1919**, I made numerous inspections of the gardens and wholesale dealers premises. One small outbreak occurred during the year, which I immediately reported to the Ministry of Agriculture, whose Inspector visited the garden and took steps to prevent the spread of the disease. No consignments of potatoes from infected areas were brought into the City. Posters were displayed at all allotment gardens, the Police Stations, &c., and 63 notices issued to growers and dealers.

**American Gooseberry Mildew Order.** The usual circulars were issued to market gardeners and greengrocers. No infected bushes or fruit came under notice during the year.

**Silver Leaf Order, 1920.** I was appointed Inspector under this Order in May. I visited all known Nurseries and Market Gardens and acquainted all growers in the district with the provisions of the Order. Two cases were reported by private growers, but no outbreak was found at any of the Market Gardens, &c.

W. A. CRAVEN, *Chief Sanitary Inspector.*

CASES OF INFECTIOUS DISEASE NOTIFIED AND REMOVED TO HOSPITAL DURING THE YEAR 1920.

NOTIFIABLE DISEASES.	CASES NOTIFIED AND CASES REMOVED										NUMBER OF CASES NOTIFIED AND CASES REMOVED FROM EACH LOCALITY.																			
	At all Ages		At Ages —Years										BATH CITY (TOTAL)		WALCOT		LYN. & WID.		BATHWICK		TWEETON		WESTON		BATH RURAL		MILITARY CASSES			
M	F	Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and over	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Diphtheria (including Membranous Croup)	20	45	1	1	7	14	28	2	5	2	5	...	...	...	10	24	8	8	1	2	10	2	...	...	2	...	...	...	...	...
Erysipelas	6	10	1	...	1	1	2	2	5	1	3	...	6	10	6	6	1	1	...	...	2	1	...	...	1	...	...	...	...	...
Scarlet Fever	40	67	...	9	13	25	45	5	7	1	2	...	40	67	8	20	18	24	2	3	11	15	1	4	...	...	...	...	...	...
Enteric Fever	4	1	...	1	...	...	...	3	...	...	...	...	4	1	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	5	...	...	...	...	...	...	...	...	...	...	...	5	...	2	2	...	...	...	...	3	...	...	...	...	...	...	...	...	...
Chicken Pox	42	53	5	3	16	15	20	30	1	4	...	...	42	53	20	24	16	17	1	5	5	7	...	...	...	...	...	...	...	...
Cerebro-Spinal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia	8	6	...	...	...	...	...	...	...	...	...	...	8	6	4	2	4	4	...	...	4	...	...	...	...	...	...	...	...	...
Neonatorum	20	13	...	5	1	3	2	...	...	...	...	...	20	13	5	7	8	4	...	...	7	2	...	...	...	...	...	...	...	...
Pneumonia	15	...	...	...	...	...	...	...	...	...	...	...	15	...	12	...	2	2	...	...	1	...	...	...	...	...	...	...	...	...
Malaria	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Trench Fever	2	...	...	...	...	...	...	...	...	...	...	...	2	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Encephalitis, Leth.	3	7	...	...	2	3	...	...	...	...	...	...	3	7	3	2	4	...	...	...	1	...	...	...	...	...	...	...	...	...
Poor Law	68	52	...	1	15	18	19	14	28	17	6	2	68	52	27	23	9	11	2	129	15	1	2	...	...	...	...	...	...	...
Institutions	11	10	...	...	...	...	...	4	2	3	4	3	1	10	5	4	...	...	...	5	4	1	2	...	...	...	...	...	...	...
Private	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poor Law	2	...	...	...	1	...	...	...	...	...	...	...	2	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Institutions	8	7	...	1	4	5	1	1	2	...	...	...	8	7	4	2	1	1	...	...	2	3	1	1	...	...	...	...	...	...
Private	6	8	...	...	6	5	...	...	...	...	...	...	6	8	6	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Notified	256	284	15	11	33	37	91	136	41	39	59	44	256	284	117	120	68	71	5	11	62	70	4	12	...	...	...	...	...	...
Diphtheria	18	35	1	4	13	23	2	4	2	4	...	...	18	35	8	19	7	7	...	...	3	8	1	16	22	...	...	...	...	...
Scarlet Fever	32	55	...	7	10	20	38	4	6	1	...	...	32	55	6	16	16	19	1	3	9	14	3	22	16	1	...	...	...	...
Enteric Fever	3	...	...	...	...	...	...	3	...	...	...	...	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	53	90	1	7	14	33	61	9	10	3	4	1	53	90	17	35	23	26	1	3	12	22	4	38	38	1	...	...	...	...

## MARRIAGES REGISTERED IN THE CITY OF BATH.

Year	Winter	Spring	Summer	Autumn	Total	Rate per 1,000
Mean						
1911-1915	93	146	163	156	558	16.4
1916	152	157	109	126	544	16.2
1917	112	136	127	143	518	15.8
1918	136	111	164	146	557	15.8
1919	121	217	175	177	690	20.1
1920	119	218	209	194	740	21.6

## BIRTHS, DEATHS UNDER 1 YEAR AND INFANTILE MORTALITY, 1920,

	Total			Legitimate			Illegitimate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Births ...	694	620	1314	643	593	1236	51	27	78
Deaths (under 1 year) ...	41	27	68	36	25	61	5	2	7
Infantile Mortality ...	59	44	52	56	42	49	98	74	90

## QUARTERLY RETURN OF BIRTHS.

Births Registered	Winter	Spring	Summer	Autumn	Year 1920
Legitimate ...	391	337	272	255	1255
Illegitimate ...	24	14	19	18	75
Total Births...	415	351	291	273	1330
Rate per 1,000	24.2	20.4	16.9	15.9	19.4
English Rate	29.0	26.6	24.3	22.0	25.4

## BIRTHS AND DEATHS REGISTERED IN VARIOUS DISTRICTS.

1920	Births					Deaths				
District	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Total	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Total
Walcot ...	146	133	102	92	473	86	72	69	82	309
Hospitals ...	27	23	23	38	111	42	28	17	33	120
Lyn.-Wid. ...	89	67	79	48	283	45	32	24	43	144
Workhouse ...	12	4	6	9	31	30	21	23	33	107
Bathwick ...	14	18	9	3	44	18	10	12	12	52
Twerton ...	101	91	54	69	315	27	21	17	27	92
Weston ...	26	15	18	14	73	25	15	26	25	91
Bath ...	415	351	291	273	1330	273	199	188	255	915

## CORRECTED SUB-DISTRICT MORTALITY

including 37 deaths of residents outside the District.

1920	Locality of Death						Total Persons	Corrected Rate	
	Private Houses		Hospitals & Asylums		Workhouse			Net	Standard
	Male	Female	Male	Female	Male	Female			
Walcot	...	110	174	25	19	26	36	390	
Lyn.-Wid.	...	53	90	18	14	3	3	181	
Bathwick	...	19	34	3	..	3	1	60	
Twerton	...	52	40	8	2	9	7	118	
Weston	...	27	30	5	4	2	2	70	
Bath	...	261	368	59	39	43	49	819	11.9
Non-Municipal..		19	18	62	20	7	7	133	10.3





DEATHS IN WHOLE DISTRICT AT SUBJOINED AGES.

[illegible]

## DEATHS IN LOCALITIES—1920

CAUSES	Persons.					WALCOT.		LYN-WID.		BATHW'K		TWERTON		WESTON		Registrar General's Transfers		Non-Res.		Pub. Inst.	
		M	F.	M	F.	M	F.	M	F.	M	F.	M	F.	M	F.	M	F.	M	F.	M	F.
1 Enteric Fever ...																					
3 Measles ..	7	3	4	2	1	1	3											1		1	
4 Scarlet Fever ...	1	1												1						1	
5 Whooping Cough ...	1	1		1																1	
6 Diphtheria ...	3	1	2		2	1										1	1			1	1
7 Influenza ...	17	7	10	5	4	2	2			1		1		2				1			
8 Erysipelas ...	1	1		1																1	
9 Septicæmia ...																					
10 Tetanus ...	2	2		1								1								2	
11 Phthisis ...	44	21	23	12	13	3	3	1	2	2	2	3	3	2				1		8	6
12 Tubercular Men'g'tis ...	3	2	1	1		1						1								1	
13 Other Tubercular ...	7	5	2	4	1	1	1													4	
14 Syphilis ...																		1		1	
15 Cancer ...	84	35	49	12	28	9	9	3	5	6	6	5	1			1	10	7	14	8	
16 Sarcoma ...	3	2	1	2										1						1	
17 Rheumatic Fever ...	2		2				2														
18 Osteo-Arthritis ...	3		3		1		1							1				1			1
19 Diabetes ...	6	1	5	1	2		2			1											
20 Meningitis ...	3	2	1	1	1	1												2	1	1	2
21 Cerebral Hæmorrhage ...	66	25	41	9	17	8	9		6	5	5	3	4	1	1	3	2	7	11		
22 Hemiplegia ...	3	2	1		1	1				1								1			2
23 Epilepsy ...	3	2	1	2	1											1	1			2	1
24 Heart Disease ...	116	39	77	16	33	8	24	2	7	9	4	4	9	1	1	11	4	9	3		
25 Arterial Sclerosis ...	17	9	8	4	3	2	4	1		1		1	1	1	1			1		1	
26 Bronchitis ...	57	27	30	11	15	5	8			10	4	1	3			1		2		7	6
27 Broucho-Pneumonia ...	15	9	6	5	6					3										1	1
27a Trench Fever ...																		1			
28 Pneumonia...	34	18	16	5	11	3	3	1		8		1	2			2	2	2	3	4	
29 Other diseases of Respiratory Organs ...	11	4	7	1	5					2	1	1	1					4	2	5	2
30 Diarrhœa and Enteritis (all ages) ...	11	6	5	3		1	1	2	1		3			2	1			2	4	2	
31 Ulcer of Stomach and Duodenal Ulcer ...	7	1	6	1	3		3									2	4	2	2	4	
32 Appendicitis ...	3	2	1			1	1			1								4		4	1
33 Hernia and Obstruction ...	8	4	4	2	1	1	1					1	1	1		1	2	3	3	6	
34 Cirrhosis of Liver ...	4	2	2	1	1							1	1			1				2	
35 Peritonitis ...	1		1		1													2		2	
36 Alcoholism ...	1		1											1							1
37 Nephritis ...	22	10	12	2	6	2	1	3	2	3	3					1	4	3	2	5	
38 Diseases of the Bladder ...	6	5	1	2		1	1	1				1					3		3		
39 Diseases of Prostate ...	4	4				3		1									1		3		
40 Puerperal Fever ...	1		1		1																
41 Pregnancy & Parturition ...	2		2		2														2		3
42 Gangrene ...	7	2	5	1	5			1											2	3	
43 Debility & Prematurity ...	44	27	17	16	8	3	2	1		6	7	1					2	1	7	6	
44 Old Age ...	78	21	57	11	28	2	13	3	8	2	4	3	4			3	3	1	6	18	
44a Eucephalitis Lethargica ...	1	1		1																	
45 Violent Deaths ...	24	14	10	7	6	1	3	1		3	1	2		2			5	1	7	4	
46 Suicide ...	5	2	3		2	1		1					1			2	1	1		1	
47 Other defined diseases ...	81	43	38	18	20	12	10	3	2	6	5	4	1	5	1	20	6	22		8	
48 Ill-defined or unknown																					
Total ...	819	363	456	161	229	74	107	25	35	69	49	34	36	15	22	88	45	135	115		



## VITAL STATISTICS OF WHOLE DISTRICT DURING 1920 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths		Net Deaths belonging to the District.			
		Uncorrected Number	Net.		Number.	Rate.	of Non-Residents registered in the District.	of Residents not Registered in the District.	Under 1 Year of Age		At all Ages	
			Number.	Rate*					Nnber.	Rate per 1,000 Net Births	Number.	Rate.
1915	63,452	1,050	1,055	15.0	1,032	16.26	97	72	83	79	1,007	15.87
1916	61,831	1,059	1,062	15.8	959	15.51	94	51	80	75	916	14.81
1917	58,799	786	789	12.0	991	16.85	123	44	51	65	912	15.51
1918	63,102	813	831	11.8	1,108	17.56	170	78	58	70	1,016	16.10
1919	65,919	978	980	14.3	1,023	15.52	136	63	40	41	950	14.41
1920	68,546	1,330	1,314	19.1	915	13.35	133	37	68	52	819	11.95
Average 1911-15	68,494	1,116	1,117	15.9	958	13.98	74	49	87	78	934	13.62
Average 1916-20	63,639	993	995	14.6	999	15.76	131	55	59	61	923	14.56

\*The Birth-rates for the Years 1915-6-7-8-9 and 20 are calculated on an estimated population of 70292; 62273; 65544; 70703; 68668 and 63708 respectively.

## BIRTH-RATE, DEATH-RATE, AND ANALYSIS OF MORTALITY DURING 1920.

1920.	Birth-rate per 1,000 total population.	Annual Death-rate per 1,000 Civilian Population.							Rate per 1,000 Births.	
		All Causes.	Enteric Fever.	Small-Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Diarrhoea and Enteritis (under 2 Years).	Total under 1 Year.
England and Wales	25.4	12.4	0.01	0.00	0.19	0.04	0.11	0.15	8.3	80
Bath ...	19.1	10.3	...	...	0.10	0.01	0.01	0.04	4.57	52
96 Great Towns (including London)	26.2	12.5	0.01	0.00	0.22	0.04	0.14	0.16	10.4	85
148 Smaller Towns ...	24.9	11.3	0.02	0.00	0.19	0.03	0.10	0.14	7.8	80
London ...	26.5	12.4	0.01	0.00	0.22	0.05	0.17	0.22	9.5	75

## VACCINATION RETURNS.

District.	1919				January to June, 1920			
	No. Births	Successful Vaccination	Statutory Declaration	Died Unvaccinated	No. Births	Successful Vaccination	Statutory Declaration	Died Unvaccinated
Walcot ...	410	89	276	45	334	69	215	50
Lyncombe	247	56	174	17	192	35	138	19
Twerton ...	306	43	237	26	253	16	202	35
Total ...	963	188	687	88	779	120	555	104

# INFANT MORTALITY—YEAR 1920.

Net Deaths from stated causes at various Ages under 1 Year of Age.

CAUSE OF DEATH.		Under 1 Week	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Mths.	3 Months and under 6 Mths.	6 Months and under 9 Mths.	9 Months and under 12 Mths.	Total Deaths under 1 Year
All causes	{ Certified	30	5	..	3	38	9	10	8	3	68
	{ Uncertified	..	..	..	..	..	..	..	..	..	..
Small-pox	...	..	..	..	..	..	..	..	..	..	..
Chicken-pox	...	..	..	..	..	..	..	..	..	..	..
Measles	...	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	...	..	..	..	..	..	..	..	..	..	..
Whooping-Cough	...	..	..	..	..	..	..	..	..	..	..
Diphtheria and Croup	...	..	..	..	..	..	..	..	..	..	..
Erysipelas	...	1	..	..	..	1	..	..	..	..	1
Tuberculous Meningitis	...	..	..	..	..	..	..	..	..	..	..
Abdominal Tuberculosis	...	..	..	..	..	..	..	..	..	..	..
Other Tuberculous Diseases	...	..	..	..	..	..	..	..	..	..	..
Meningitis (not Tuberculous)	...	..	..	..	..	..	..	..	..	..	..
Convulsions	...	1	..	..	..	1	..	1	1	..	3
Laryngitis	...	..	..	..	..	..	..	..	..	..	..
Bronchitis	...	..	..	..	..	..	1	3	2	2	8
Pneumonia (all forms)	...	..	..	..	..	..	2	1	3	..	6
Diarrhœa	...	..	..	..	..	..	..	..	..	..	..
Enteritis	...	..	1	..	..	1	..	2	1	1	5
Gastritis	...	..	..	..	..	..	..	..	..	..	..
Syphilis	...	..	..	..	..	..	..	..	..	..	..
Rickets	...	..	..	..	..	..	..	..	1	..	1
Suffocation, overlying	...	..	..	..	..	..	..	..	..	..	..
Injury (including want of proper attention) at Birth	...	..	..	..	1	1	..	..	..	..	1
Atelectasis	...	..	..	..	..	..	..	..	..	..	..
Congenital Malformation	...	5	1	..	..	6	..	1	..	..	7
Premature Birth	...	15	1	..	..	16	2	..	..	..	18
Atrophy, Debility & Marasmus	...	8	2	..	2	12	4	2	..	..	18
Other Causes	...	..	..	..	..	..	..	..	..	..	..
Totals	...	30	5	..	3	38	9	10	8	3	68

Net Births in the Year { Legitimate, 1236. Infant Mortality, 49.  
 { Illegitimate, 78. Infant Mortality, 90.

Net Deaths in the Year { Legitimate, 61. } Infant Mortality, 52.  
 { Illegitimate, 7. }

# BATH CENTRAL CLIMATIC STATION, HENRIETTA PARK.

## SUMMARY OF METEOROLOGICAL OBSERVATIONS FOR THE YEAR, 1920.

North Latitude 51° 23' 8". West Longitude 2° 21' 14". Estimated Height above Sea Level. Barometer 84 ft. Thermometers 70 ft.

1920	BAROMETER.						THERMOMETERS IN STEVENSON SCREEN.										EARTH TEMPERATURES.				Bright Sunshine in hours.			
	Mean 9 a.m. Corrected to 32° and M.S.L.	Absolute Maximum	Corrected.	Day of Month.	Absolute Minimum	Corrected.	Day of Month.	Range.	Mean Temperature of Air.	Mean of Maximum.	Mean of Minimum.	Absolute Maximum.	Day of Month.	Absolute Minimum.	Day of Month.	Mean Dry Bulb.	Mean of Wet Bulb.	Relative Humidity.	4 ft. in Gravel.			1 ft.		
																			Max.	Min.		Mean.	Mean.	Mean.
Jan. ...	29.892	30.491	16	28.945	11	1.546		43.8	50.3	36.7	58.5	12	22.9	7	43.0	41.1	84	45.4	43.8	44.7	42.2	50.5		
Feb. ...	30.192	30.632	5	29.804	17	.828		44.7	51.1	38.4	62.4	18	28.5	22	43.4	41.4	85	45.5	44.6	45.0	43.3	71.1		
March	29.916	30.675	3	28.857	15	1.818		46.2	54.6	38.3	67.7	30	26.5	9	45.9	43.5	82	47.7	44.9	45.5	44.9	119.2		
April ...	29.683	30.197	24	29.055	13	1.142		48.8	55.1	43.0	64.6	23	30.0	30	49.5	46.5	80	49.7	47.1	48.4	49.4	75.2		
May ...	30.024	30.565	5	29.395	2	1.170		54.4	63.1	46.6	77.9	25	34.1	5	55.6	51.2	73	55.0	49.7	51.7	55.0	157.4		
June ...	30.018	30.345	23	29.705	11	.640		58.4	66.8	51.2	75.0	2	35.9	5	59.5	55.6	77	58.8	55.2	57.1	61.2	154.1		
July ...	29.891	30.269	22	29.564	8	.705		58.3	64.5	52.9	70.2	31	42.5	25	59.4	55.9	79	60.1	58.8	59.4	61.8	115.4		
Aug. ...	30.096	30.481	28	29.497	5	.984		57.4	65.4	50.3	71.6	8	40.3	20	59.1	54.7	74	60.0	59.6	59.8	61.2	147.5		
Sept. ...	30.023	30.302	11	29.434	18	.868		55.6	64.5	47.6	75.0	12	35.1	20	56.5	54.0	84	60.0	57.8	59.2	58.8	102.6		
Oct. ...	29.924	30.320	26	29.300	31	1.020		52.3	58.6	46.3	67.9	7	34.6	27	51.5	49.9	89	57.8	54.7	57.0	55.1	91.0		
Nov. ...	30.053	30.471	9	29.271	1	1.200		44.6	51.4	37.8	59.4	14	28.2	23	43.2	42.2	91	54.5	49.4	51.8	47.2	62.6		
Dec. ...	30.004	30.449	16	29.335	21	1.114		41.2	45.7	36.3	56.7	2	21.6	13	40.8	39.4	88	49.5	44.6	46.9	42.1	42.4		
Means for Year	29.976	30.433		29.347		1.086		50.5	57.6	43.8	67.2		31.7		50.6	47.9	82	53.7	50.9	52.2	51.9	1189.0		



# MONTHLY RAINFALL AT VARIOUS BATH STATIONS, 1920

MEAN MONTHLY RAINFALL, YEARS 1866—1920.

Observations 9 a.m. daily at all Stations, 1920	Central Station, Henrietta Park N. Latitude 51° 23' 8" W. Longitude 2° 21' 14" 5 in Gauge O.D. 67 ft.				Monkswood. N. Latitude 51° 26' 19" W. Longitude 2° 21' 16" 5 in. Gauge O.D. 363 ft.				Bathaston. N. Latitude 51° 24' 53" W. Longitude 2° 19' 51" 5 in. Gauge O.D. 248 ft.				Charlcombe. N. Latitude 51° 23' 49" W. Longitude 2° 21' 37" 8 in. Gauge O.D. 325 ft.				Climatic Station, Statutory Hospital. N. Latitude 51° 21' 52" W. Longitude 2° 19' 10" 5 in. Gauge O.D. 520 ft				Royal Literary Institution. N. Latitude 51° 22' 52" W. Longitude 2° 21' 21" 6 in. Gauge O.D. 74 ft.	Mean 55 years 1866 to 1920.
	Rain and Snow Total depth in inches	Number of Days on which Rain fell.	Greatest fall in 24 hours.	Date.	Rain and Snow Total depth in inches	Number of Days on which Rain fell.	Greatest fall in 24 hours.	Date.	Rain and Snow Total depth in inches.	Number of Days on which Rain fell.	Greatest fall in 24 hours.	Date.	Rain and Snow Total depth in inches.	Number of Days on which Rain fell.	Greatest fall in 24 hours.	Date.						
January ...	4'03	20	1'03	28	4'48	4'25	3'64	3'50	19	0'98	10	4'23	4'23	2'79								
February ...	1'33	12	0'27	10	1'48	1'59	1'60	1'28	10	0'27	10	1'16	1'16	2'20								
March ...	2'34	19	0'44	13	2'54	2'60	2'61	2'10	18	0'40	13	2'02	2'02	2'27								
April ...	4'01	27	0'49	9	4'72	4'90	4'85	4'44	23	0'60	11	4'09	4'09	2'09								
May ..	1'89	13	0'44	28	2'17	2'47	2'08	1'69	10	0'39	1	1'69	1'69	1'98								
June ...	2'90	12	0'75	12	3'94	3'88	3'38	3'75	11	1'13	18	3'08	3'08	2'23								
July ...	5'49	26	1'26	23	4'99	5'32	5'14	5'32	22	1'10	23	5'93	5'93	2'55								
August ..	1'04	7	0'35	4	1'19	1'17	1'18	1'01	4	0'40	4	1'05	1'05	2'91								
September	1'23	8	0'41	30	1'27	1'10	1'07	1'06	8	0'28	30	1'04	1'04	2'56								
October ...	2'92	11	0'59	15	2'79	2'71	3'06	2'97	11	0'50	3	2'88	2'88	3'26								
November	1'70	10	0'47	16	1'26	1'82	1'92	1'72	9	0'40	16	1'75	1'75	2'70								
December...	2'73	19	0'48	22	2'88	3'08	3'12	2'68	13	0'45	23	2'44	2'44	3'30								
Totals ..	31'61	184			33'7	31'89	33'65	31'52	158			31'36	31'36	30'84								